

WHAT IS CLAIMED IS:

1. A polypeptide comprising a W-rich peptide and a conservative variant or functional fragment thereof.
- 5 2. The polypeptide according to claim 1, which is from 4 to 15 amino acids long.
3. The polypeptide according to claim 2, which is from 4 to 10 amino acids long.
4. The polypeptide according to claim 3, which is from 4 to 7 amino acids long.
- 10 5. The polypeptide according to claim 4, which is 6 amino acids long.
6. The polypeptide according to claim 1, which is represented by SEQ ID NOS:4, 5, 6, 8, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 15 34, 35, 35 or 7.
7. The polypeptide according to claim 6, which is represented by SEQ ID NOS:4, 5, 6, 8, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 or 30.
- 20 8. The polypeptide according to claim 7, which is represented by SEQ ID NOS:4, 5, 6, 8, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 or 27.
9. The polypeptide according to claim 8, which is represented by SEQ ID NOS:4, 16, 17, 18, 19, 20, 21, 22, 23 or 25.
- 25 10. The polypeptide according to claim 9, which is represented by SEQ ID NOS:4, 16, 18, 20, 21 or 22.
11. The polypeptide according to claim 10, which is represented by SEQ ID NOS:4 30 or 16.

12. A W-rich peptide mimic.
13. A method of preventing inflammation in a subject comprising the steps of:
5 providing an inflammation preventing effective amount of the polypeptide according to claim 1 or a W-rich peptide mimic thereof to the subject in need thereof.
14. A method of treating arthritis in a subject comprising the steps of: providing an inflammation preventing effective amount of the polypeptide according to claim 1 or a
10 W-rich peptide mimic thereof to the subject in need thereof.
15. A method of treating an auto-immune disease in a subject comprising the steps of: providing a therapeutically effective amount of the polypeptide according to claim 1 or a W-rich peptide mimic thereof to the subject in need thereof.
15
16. A method of preventing binding of A β 42 to human neutrophils comprising contacting the neutrophil with the polypeptide according to claim 1 or a W-rich peptide mimic thereof.
- 20 17. A method of treating Alzheimer's Disease comprising administering a therapeutically effective amount of the polypeptide according to claim 1 or a W-rich peptide mimic thereof to a subject in need thereof.
- 25 18. A method of identifying a FPR class receptor antagonist comprising the steps of: providing a cell having a FPR class receptor; contacting the cell with a candidate antagonist compound; and identifying the candidate antagonist compound as an antagonist compound if the candidate binds to a FPR class receptor and inhibits its activity.

19. The method according to claim 18, wherein the FPR class receptor is a FPRL1.
20. A pharmaceutical composition comprising the polypeptide according to claim 1 or W-rich peptide mimic thereof.